

REMARKS

Claims 1, 5-8, 9-13 and 16-17 are pending. Of those, claims 1, 8 and 13 are independent. By this reply, claims 2, 4, 10 and 15 have been canceled with prejudice to or disclaimer of the subject matter contained therein. Claims 3, 9 and 14 were canceled previously.

§112, Second Paragraph, Rejection

On page 2 of the Office Action, claims 15-17 are rejected under 35 U.S.C. §112, second paragraph, for being indefinite due to at least indirect dependence upon canceled claim 14. Applicants appreciate the Examiner's cooperation in identifying this typographical error. By this reply, claim 14 has been amended to depend from claim 13. Accordingly, withdrawal of this rejection is requested.

§102(e) Rejection, '324 PGPub

Beginning on page 2 of the Office Action, claims 1-2, 4-8, 10-13 and 15-17 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Pre-Grant Publication (PGPub) No. 2003/0115324 (the '324 PGPub). Applicants traverse.

As depicted in Fig. 3, the '324 PGPub discloses a host processor 12 connected via a network 21 to a storage system 20. Plural host bus adapters (HBAs) 45, 45a, etc. are provided in host processor 12. When host processor 12 makes an input/output (I/O) request to access storage system 20, that request is made via HBA 45 or 45a. Within storage system 20, filter & adapter (F&A) unit 34 connects ports of storage system 20 (not depicted) to storage devices 38a, 38b, etc. via disk adapters (DAs) 36a, 36b, etc., respectively. F&A unit 34 includes a transient filter table 84, which is depicted in more detail in Fig. 5.¹

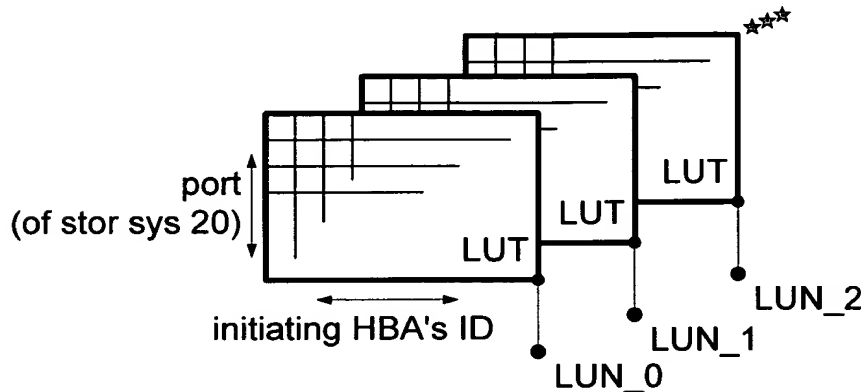
An address of an I/O request received by storage system 20 is compared against the information in transient filter table 84.² The address includes the ID of the

¹ As noted in paragraph [0045], "transient filter table 84 is apportioned into a number of [sub-]tables, one for each port of the storage system" 20. Hence, the '324 PGPub indirectly establishes that storage system 20 has ports.

² See paragraph [0049].

HBA which initiated the request, the ID of the port of storage system 20 which received the request and the LUN for which access is being requested.³

As depicted in Fig. 5, transient filter table 84 is a matrix of sub-tables for which each column in the matrix corresponds to a logical unit number (LUN)⁴, and where a LUN is used to identify a storage volume⁵. Each row in the matrix corresponds to port of storage system 20.⁶ Alternatively, transient filter table 84 can be depicted as in the following diagram.



In the above-diagram, transient filter table is a group of sub-tables, there being a sub-table for each LUN. Each sub-table is organized such that rows correspond to the ports of storage system 20, while the columns correspond to the IDs of the various HBAs, e.g., 45, 45a, etc.

The '324 PGPub teaches that the LUN is used to index into transient table filter 84 to get the appropriate sub-table. Then the port ID and the ID of the initiating HBA are used to index into the sub-table to determine if a bit is set, where the bit represents access permission for the given HBA.

In contrast, a distinction of amended claim 1 over the '324 PGPub is a LUN mapper that includes a plurality of LUN maps each of which is specific to one of a plurality of hosts, respectively, the LUN mapper being operable to use a given host id parameter to select from among the plurality of LUN maps. Again, '324 PGPub organizes transient filter table 84 as a group of LUN-specific maps one of which is selected corresponding to a given LUN, with indexing into the selected LUN-specific

³ See paragraph [0049].

⁴ See paragraph [0048].

⁵ See paragraph [0048].

⁶ See paragraph [0048].

map being done according to the given port ID and the ID of the given initiating HBA.

Claims 5-7 depend at least indirectly from claim 1, respectively, and share at least the distinction of claim 1 by dependency. Claims 2 and 4 have been canceled making the rejection thereof moot.

Independent claims 8 and 13 recite distinctions over the '324 PGPub that are similar to the distinction of claim 1, respectively. Claims 11-12 and 16-17 depend at least indirectly from claims 8 and 13, respectively, and share at least the respective distinction thereof. Claims 10 and 15 have been canceled, making the rejections thereof moot.

In view of the foregoing discussion, the §102 rejection of claims 1-2, 4-8, 10-13 and 15-17 over the '324 PGPub is improper and Applicants request that it be withdrawn.

Allowable Subject Matter

Applicants acknowledge with appreciation the Examiner's indication on page 5 of the Office Action that claims 7, 12 and 17 would define allowable subject matter but for their respective dependence upon rejected claims.

CONCLUSION

The issues in the case are considered to be resolved. Accordingly Applicants again request a Notice of Allowability.

Person to Contact

In the event that any matters remain at issue in the application, the Examiners are invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

Dated: 3/31/2005

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